

### REMARKS

By this Amendment, claims 1-2, 7-11, 14-17, 21-22 and 36-41 are amended. Claims 12-13, 18-20 and 23-35 remain in the application. Thus, claims 1-2 and 7-41 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

Minor editorial and clarifying revisions were made to claims 1-2, 7-11, 14-17, 21-22 and 36-41 in order to improve their U.S. form. The Applicants submit that the amendments to these claims were not made to narrow the scope of protection for the present invention as previously presented.

In item 7 on page 3 of the Office Action, claim 1 was objected to because of the identified informalities. Claim 1 has been amended to place the alphabetical numeral “(c)” after the term “or” in line 19. In view of this revision to claim 1, the Applicants respectfully request the Examiner to withdraw the object to claim 1.

In item 2 on page 3 of the Office Action, claims 1-2, 7-21, 30-31, 33-34 and 37-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over He et al. (U.S. 6,088,451) in view of Taniguchi et al. (U.S. 6,445,679) and Chuah (U.S. 6,115,390).

This rejection is respectfully traversed for the following reasons.

The present invention provides a network management system which is capable of guaranteeing one or more nodes access to transmission bands when the one or more nodes have been approved for access.

In particular, the network management system includes one or more nodes and a recording medium which is connected to the nodes through a network and which is operable to store data. The network management system of the present invention also includes a data manager which is operable to manage physical information of the data of the recording medium apparatus, distinctive information and security information concerning the data, and system configuration information of the network.

The network management system of the present invention also includes an access manager which is operable to manage access to data of the recording medium apparatus. In particular, the access manager is operable judge whether or not to approve the access from the information of the data manager, a kind of access, a band state of the network, and a band state of an interface of the recording medium apparatus.

The present invention provides that the nodes are operable to query the access manager, in accessing the recording medium apparatus, whether or not the access can be approved, and to act in accordance with the response of the access manager. The access manager is then operable to secure a transmission band for accessing the data when the access to the data is approved.

Furthermore, the present invention provides that the access manager is operable to investigate an access state of the recording medium apparatus. The access manager is also operable to send access approval to a querying node if:

- (a) a preceding access is a write access, and a present access is a read access,
- (b) the preceding access is a read access, or
- (c) no preceding access exists,

if a first access band is secured in an I/O band of the recording medium apparatus, and if a second access band is secured in a band of the network. (See, for example, page 9, line 10 to page 10, line 6 of the specification and Figure 4).

The present invention also provides that the querying node that has received access approval from the access manager is operable to commence access to the data.

The above-described features of the present invention are recited in each of independent claims 1-2 and 40-41. Accordingly, claims 1-2 and 40-41 each recite an access manager operable to perform an investigate operation of the access state of a recording medium apparatus.

In item 5 on page 5 of the Office Action, the Examiner, acknowledging that He et al. clearly does not disclose or suggest an access manager operable to investigate an access state of the recording medium apparatus and to send access approval to a querying node if the above-described conditions are met, opined that Chuah cures the deficiencies of He et al.

Chuah discloses a method for reserving bandwidth and for resolving conflicts among remote hosts in a wireless network, where the remote hosts make bandwidth requests to a base station. In particular, Chuah discloses that the base station in the wireless network schedules transmission of its uplink and downlink traffic and allocates bandwidth dynamically, based on traffic characteristics, quality of service (QoS) requirement, and current bandwidth needs of all of the remote hosts. The base station

uses a service tag to schedule the transmission order of packets from the remote hosts to their desired destination (see Column 10, lines 8-19).

Chuah also discloses that a mobile switching center (MSC) 240 and an element manage server (EMS) 250 of the base station provide priority access within a same message stream for each remote host, where the provided priority access makes control messages higher in priority than data messages. The control messages which are given higher priority include (a) an association request for requesting association of a remote host's wireless modem, (b) a connect request for requesting connection set-up between a remote host and the base station, (c) a paging response for responding to a paging request, and (d) a bandwidth allocation request for requesting an allocation of bandwidth after a remote station has been inactive for a while (see Column 18, line 65 to Column 19, line 19).

Chuah also discloses that allocation conflicts for downlink and uplink of data by the remote hosts to its intended location are resolved by the remote hosts waiting for a transmit permit, higher priority remote hosts obtain a higher priority according to each remote hosts' queue, and nodes, after nodes transmitting packets to their intended destinations once a transmit permit is obtained, exit the request state and return to a waiting state (see Column 20, lines 10-65, and Column 24, lines 40-57).

Accordingly, Chuah merely discloses a method for resolving bandwidth conflicts among remote hosts which compete for the same bandwidth to uplink and downlink data packets on a wireless network. Although the Examiner has applied Chuah to cure the obvious deficiencies of He et al., Chuah clearly does not even contemplate investigating an access state of a recording medium apparatus for write access and read access to the recording medium apparatus. Instead, Chuah merely provides a conflict resolution method for resolving conflicts among a plurality of remote hosts which seek to use the allocated bandwidth of a wireless network to uplink and downlink data to an intended destination. Furthermore, since Chuah is merely concerned with allowing remote hosts to uplink and downlink data from an intended source, Chuah does not secure an I/O band of a recording medium apparatus.

Accordingly, Chuah clearly does not disclose, suggest or even contemplate an access manager operable to investigate an access state of the recording medium

apparatus, and to send access approval to a querying node if: (a) a preceding access (to the recording medium apparatus) is a write access, and a present access (to the recording medium apparatus) is a read access, (b) the preceding access (to the recording medium apparatus) is a read access, or (c) no preceding access exists, if a first access band is secured in an I/O band of the recording medium apparatus, and if a second access band is secured in a band of the network, as recited in each of claims 1-2 and 40-41.

Therefore, Chuah clearly does not cure the deficiencies of He et al. for failing to disclose or suggest the access manager of claims 1-2 and 40-41.

Taniguchi et al. discloses discarding a packet having a lower priority level (a packet with a lower priority in a stream is positively annulled) to decrease data volume so that an actual transmission rate is changed to a new transmission rate (see column 2, lines 20-22 and 55-65). However, similar to He et al. and Chuah, Taniguchi does not teach or suggest determining whether or not to grant access to data based on a preceding access, the available I/O band for the hard disk and the available band of the network. Therefore, Taniguchi does not disclose or suggest an access manager that is operable to investigate an access state of a recording medium apparatus, as recited in each of claims 1-2 and 40-41.

Therefore, He et al., Taniguchi et al. and Chuah clearly fail to disclose or suggest each and every limitation of claims 1-2 and 40-41. Accordingly, no obvious combination of He et al., Taniguchi et al. and Chuah would result in the inventions of claims 1-2 and 40-41 since He et al., Taniguchi et al. and Chuah, either individually or in combination, clearly do not disclose or suggest each and every limitation of claims 1-2 and 40-41.

Furthermore, the Examiner is respectfully reminded that an obviousness rejection cannot be based on the resort of the Examiner to various non-pertinent references and the combination of *bits and pieces of the references* in light of the Applicants' claimed invention. An extensive discussion of the criteria to be applied in obviousness rulings is set forth in In re Gordon, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed Cir. 1984), which clearly states the long-held proposition that "the fact that a prior art reference can be modified to show the patented invention does not make the modification obvious unless the prior art reference *suggests the desirability* of the modification." (emphasis added) An attempted modification of a prior art reference that is unwarranted by the

disclosure of that reference is thus improper. Accordingly, the Examiner must make a showing that the combination of two or more references was suggested by the references.

The Applicants searched in vain to find any remote suggestion in He et al., Taniguchi et al. or Chuah to combine the system of He et al. with the method disclosed in Chuah for resolving bandwidth conflicts among remote hosts which compete for the same bandwidth to uplink and downlink data packets on a wireless network. Furthermore, the Applicants could not locate any remote suggestion in Chuah to modify the method of Chuah to investigate an access state of a recording medium apparatus for write access and read access to the recording medium apparatus.

Accordingly, for the foregoing reasons, the Applicants respectfully submit that claims 1-2 and 40-41 are clearly patentable over He et al., Taniguchi et al. and Chuah since He et al., Taniguchi et al. and Chuah, either individually or in combination, clearly do not disclose or suggest each and every limitation of claims 1-2 and 40-41.

In items 27, 37 and 38 on pages 8-9 of the Office Action, the Examiner opined that either He et al. or Taniguchi et al. disclose or suggest the limitations of claims 37-39. The Applicants respectfully disagree.

The Examiner contends that He et al. is comprised of a first network 106 and a second network 302 (see Figure 3). As shown in Figure 1 of the present application, for example, the first and second networks 109, 110 of the present invention do not connect directly with one another.

This feature of the present invention is inherently recited in claims 37-39. Claim 37 has been amended to clarify that the data manager and the access manager are coupled only with the first network, and that the recording medium apparatus is coupled only with the second network. Claims 38-39 have been amended to recite that the data manager and the access manager are coupled only with first network, and that the recording medium apparatus is coupled only with one of the plurality of second networks.

However, the first and second networks 106, 302 of He et al., and the plurality of networks 14 of Taniguchi et al. (see Figure 1) are clearly disclosed as being connected directly with each other. Accordingly, since the first and second networks 106, 302 of He et al. and the plurality of networks 14 of Taniguchi et al. are directly connected with each other, neither He et al. nor Taniguchi et al. disclose or suggest that the data manager and

the access manager are coupled only with the first network, and that the recording medium apparatus is coupled only with the second network (or only with one of the plurality of second networks), as recited in claims 37-39. Similarly, Chuah clearly fails to disclose or suggest the limitations of claims 37-39.

Therefore, in addition to the deficiencies of He et al., Taniguchi et al. and Chuah for failing to disclose or suggest each and every limitation of claims 1-2 and 40-41, He et al., Taniguchi et al. and Chuah also clearly fail to disclose or suggest each and every limitation of claims 37-39.

In item 41 on page 9 of the Office Action, claims 22-29, 32 and 35-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over He et al., Taniguchi et al., Chuah and further in view of Peters et al. (U.S. 6,374,336).

As clearly demonstrated above, He et al., Taniguchi et al. and Chuah clearly fail to disclose or suggest each and every limitation of claims 1-2, 37-39 and 40-41. Peters et al. fails to disclose or suggest the access manager of claims 1-2 and 40-41 or the above-described structural arrangement of the first network, the second network, the plurality of second networks, the data manager, the access manger and the recording medium apparatus of claims 37-39. Therefore, Peters et al. fails to cure the deficiencies of He et al., Taniguichi et al. and Chuah for failing to disclose or suggest each and every limitation of at least claims 1-2, 37-39 and 40-41.

Because of the clear distinctions discussed above, it is submitted that the teachings of He et al., Taniguchi et al., Chuah and Peters et al. clearly do not meet each and every limitation of claims 1-2, 37-39 and 40-41. Accordingly, no obvious combination of He et al., Taniguchi et al., Chuah and Peters et al. would result in the inventions of claims 1-2, 37-39 and 40-41 since He et al., Taniguchi et al., Chuah and Peters et al., either individually or in combination, clearly fail to disclose or suggest each and every limitation of claims 1-2, 37-39 and 40-41.

Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify He et al., Taniguchi et al., Chuah and Peters et al. in such as manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-2 and 40-41. Therefore, it is submitted that the claims 1-2 and 40-41, as well as claims 7-

39 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

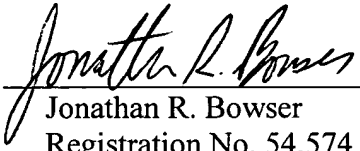
In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

A fee and a Petition for a one- month Extension of Time are filed herewith pursuant to 37 CFR § 1.136(a).

Respectfully submitted,

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